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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/786,245	02/24/2004	Kenneth H. Sinclair		5011

28731 7590 06/19/2006

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EXAMINER

RATCLIFFE, LUKE D

ART UNIT	PAPER NUMBER
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3662

DATE MAILED: 06/19/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/786,245	Applicant(s) SINCLAIR ET AL.	
	Examiner Luke D. Ratcliffe	Art Unit 3662	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) 9-15 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8, and 16- 24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on 24 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

A series of singular dependent claims is permissible in which a dependent claim refers to a preceding claim which, in turn, refers to another preceding claim.

A claim which depends from a dependent claim should not be separated by any claim which does not also depend from said dependent claim. It should be kept in mind that a dependent claim may refer to any preceding independent claim. In general, applicant's sequence will not be changed. See MPEP § 608.01(n).

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

The term "substantially" in **claims 6, 17, and 24** is a relative term which renders the claim indefinite. The term "substantially" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

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A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 2, 4, 5, 7, 16, 18, and 19-23 are rejected under 35

U.S.C. 102(e) as being anticipated by Kim (20040210343).

Referring to **claims 1, 5, 16, and 18**, Kim shows a system that includes an electronic image sensor having freedom of motion (paragraph 24), optics with a known scale factor coupled to the image sensor (figure 4), an analog to digital converter is inherent in any computer system with inputs of analog voltages, computer memory (figure 3), a clock oscillator inherent with any microcomputer (figure 3), and a distance calculating means (figure 3 Ref 40).

Referring to **claim 2**, Kim shows an orientation calculation means (paragraph 23-25).

Referring to **claims 4 and 20-23**, the wording of these claims with respect to the surface merely describes an intended use of the optical odometer and this does not add any patentable limitation to the optical odometer.

Referring to **claim 7**, Kim shows a means for measuring changes in the distance of said optics from the surface over time (paragraph 37 and 38).

Referring to **claim 19**, Kim shows the ability to determine the velocity of said object from the integrated navigation sensor (paragraph 23).

Claim Rejections - 35 USC § 103

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The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kim (20040210343) in view of Lapeyre (4688933).

Lapeyre shows the use of a fiducial mark (column 4 lines 4-27). It would have been obvious to modify Kim to include the fiducial mark as taught by Lapeyre because this is a simple way to determine the beginning or the end of a measurement area further making it easier to determine distance traveled.

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kim (20040210343) in view of Lapeyre (4688933) as applied to claims 2 above, and further in view of Truax (4502785).

Traux shows telecentric lens (column 3 lines 59-66). It would be obvious to further modify Kim to use the telecentric lens taught by Traux because this allows the image to be any size that the user desires in any ratio to the actual size.

Claims 17 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kim (20040210343) as applied to claims 16, above, and further in view of Truax (4502785).

Referring to **claims 17 and 24**, Traux shows telecentric lens (column 3 lines 59-66). It would be obvious to further modify Kim to use the telecentric lens

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taught by Traux because this allows the image to be any size that the user desires in any ratio to the actual size.

Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kim (20040210343) in view of Lapeyre (4688933) as applied to claims 2 above, and further in view of Baker (2133241).

Baker shows the ability to stabilize the distance of the optics from the distance of the surface over time (column 6 lines 32-63). It would have been obvious to further modify Kim with the distance stability taught by Baker because this allows the ambient distance between the ground and the optics to remain constant and have the distance measuring device only measure the effect that the ground has on the device.

Response to Arguments

Applicant's arguments with respect to claims 1-8 and 16-24 have been considered but are moot in view of the new ground(s) of rejection.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Luke D. Ratcliffe whose telephone number is 571-272-3110. The examiner can normally be reached on 8:00-4:30 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Tarcza can be reached on 571-272-6979. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

LDR

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